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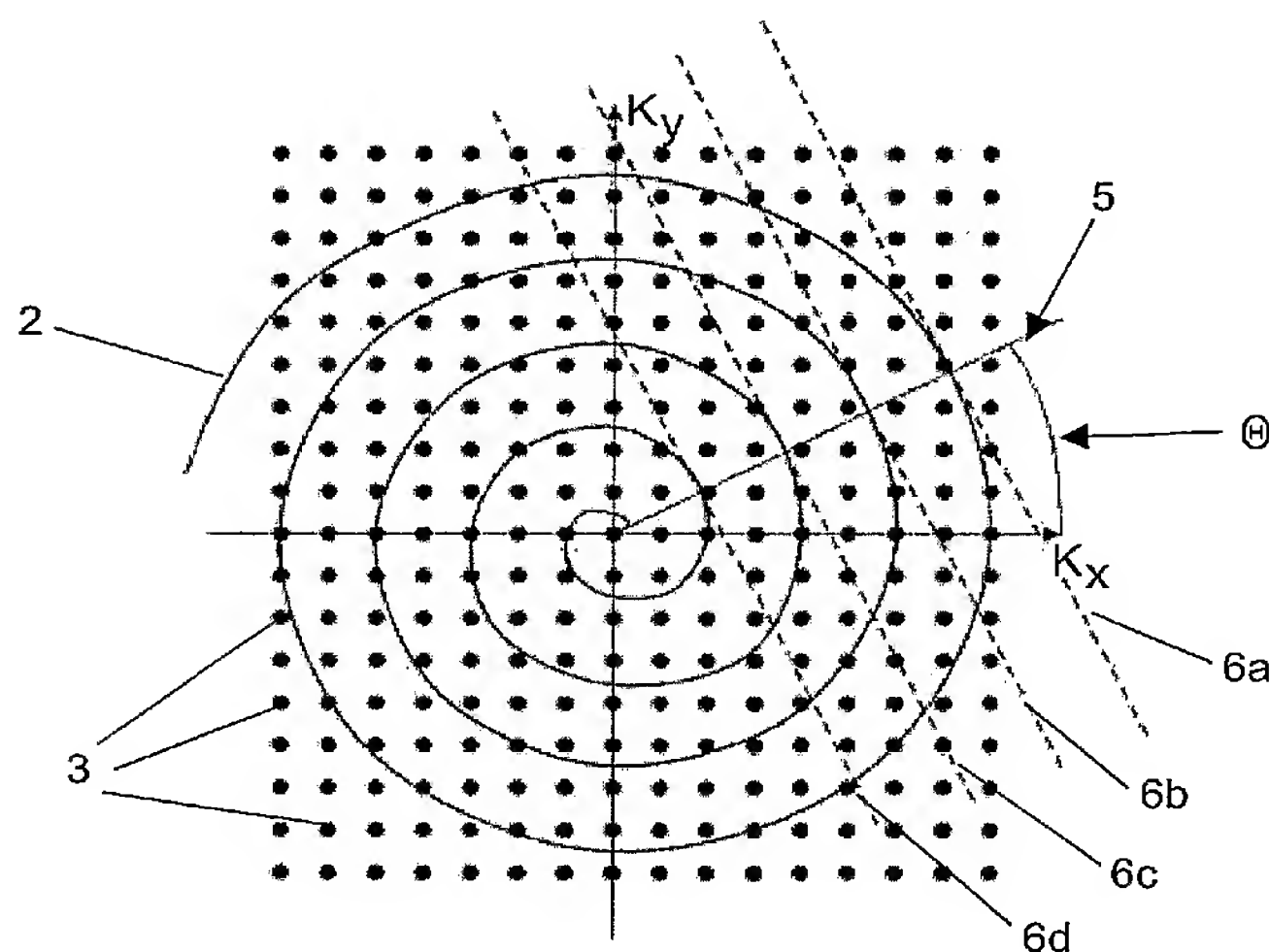NL-5656 AA Eindhoven (NL).

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(54) Title: MAGNETIC RESONANCE IMAGING METHOD

(57) Abstract: A novel magnetic resonance imaging method and apparatus is described wherein an image is derived from sub-
sampled magnetic resonance signals and on the basis of the spatial sensitivity profile of each receiving antenna. A sequence of
RF-pulses and gradients is applied, which sequence corresponds to a set of trajectories containing at least one substantially non-linear
trajectory in k-space, wherein the density of said trajectory set being substantially lower than the density corresponding to the object
size. Each signal along said trajectory set is sampled at least at two different receiver antenna positions. The image is reconstructed
by converting the data of said signals to a Cartesian grid by convolution with a gridding kernel, whereby the gridding kernel is
specific for each antenna, differs between one region and another in k-space, and is a Fourier-transform of a pattern weighted for
each antenna with respect to the Cartesian grid.

ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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